

ATTORNEY DOCKET NO. 19308.0021U1
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AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the application:

- 1 1. (Currently amended) A power control system for a power amplifier,
2 comprising:
3 a first power control loop configured to provide a control signal comprising:
4 a variable attenuator for adjusting a gain applied to a signal in the first power
5 control loop;
6 a detector for providing a direct current (DC) baseband signal representing an
7 output of the power amplifier;
8 a first comparator for comparing the DC baseband signal to a first reference
9 signal and generating an error signal;
10 a second power control loop comprising:
11 a second comparator for comparing the error signal to a second reference
12 signal and generating a secondary control signal capable of controlling the variable
13 attenuator.
- 1 2. (Original) The power control system of claim 1, wherein the secondary
2 control signal is used to control the variable attenuator to reduce attenuation in the first
3 power control loop.
- 1 3. (Original) The power control system of claim 2, wherein the variable
2 attenuator is a variable gain amplifier (VGA) having a maximum gain of zero dB.
- 1 4. (Original) The power control system of claim 1, further comprising an
2 adjustable buck voltage converter responsive to the secondary control signal, the adjustable
3 buck voltage converter configured to reduce a power supplied to the power amplifier in
4 response to the secondary control signal.

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1 5. (Original) The power control system of claim 4, wherein the adjustable
2 buck voltage converter reduces supply current to the power amplifier until saturation of the
3 power amplifier is detected.

1 6. (Original) The power control system of claim 1, wherein the secondary
2 control signal is used to control the variable attenuator to reduce attenuation in the first
3 power control loop, and further comprising:
4 an adjustable buck voltage converter responsive to the secondary control signal, the
5 adjustable buck voltage converter configured to reduce the power supplied to the power
6 amplifier in response to the secondary control signal until saturation of the power amplifier
7 is detected.

1 7. (Currently amended) A method for operating a power control loop for a
2 power amplifier, comprising:
3 measuring a power level of a signal output from the power amplifier;
4 generating an error signal by comparing the power level of the signal output from the
5 power amplifier to a first reference signal;
6 generating a primary control signal responsive to the error signal in a primary control
7 loop; and
8 deriving a secondary control signal responsive to the error signal and a second
9 reference signal.

1 8. (Original) The method of claim 7, further comprising:
2 using the secondary control signal to control a gain applied to the signal output from
3 the power amplifier.

1 9. (Original) The method of claim 8, wherein the gain applied to the signal
2 output from the power amplifier is controlled by a variable attenuator, the variable attenuator
3 configured to receive the signal output from the power amplifier.

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1 10. (Original) The method of claim 7, further comprising:
2 using the secondary control signal to control an adjustable buck voltage converter,
3 the adjustable buck voltage converter configured to provide a supply current to the power
4 amplifier.

1 11. (Original) The method of claim 10, wherein the adjustable buck voltage
2 converter reduces supply current to the power amplifier until saturation of the power
3 amplifier is detected.

1 12. (Original) The method of claim 7, further comprising:
2 using the secondary control signal to control a gain applied to the signal output from
3 the power amplifier; and
4 using the secondary control signal to control an adjustable buck voltage converter,
5 the adjustable buck voltage converter configured to provide a supply current to the power
6 amplifier, wherein the adjustable buck voltage converter reduces supply current to the power
7 amplifier until saturation of the power amplifier is detected.

1 13. (Currently amended) A system for operating a power control loop for a
2 power amplifier, comprising:
3 means for measuring a power level of a signal output from the power amplifier;
4 means for generating an error signal by comparing the power level of the signal
5 output from the power amplifier to a first reference signal;
6 means for generating a primary control signal responsive to the error signal in a
7 primary control loop; and
8 means for deriving a secondary control signal responsive to the error signal and a
9 second reference signal.

1 14. (Original) The system of claim 13, further comprising:
2 means for using the secondary control signal to control a gain applied to the signal
3 output from the power amplifier.

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1 15. (Original) The system of claim 14, wherein the gain applied to the signal
2 output from the power amplifier is controlled by a variable attenuator means, the variable
3 attenuator means for receiving the signal output from the power amplifier.

1 16. (Original) The system of claim 13, further comprising:
2 means for using the secondary control signal to control an adjustable buck voltage
3 converter means, the adjustable buck voltage converter means for providing a supply current
4 to the power amplifier.

1 17. (Original) The system of claim 16, wherein the adjustable buck voltage
2 converter means reduces supply current to the power amplifier until saturation of the power
3 amplifier is detected.

1 18. (Original) The system of claim 13, further comprising:
2 means for using the secondary control signal to control a gain applied to the signal
3 output from the power amplifier; and
4 means for using the secondary control signal to control an adjustable buck voltage
5 converter means, the adjustable buck voltage converter means for providing a supply current
6 to the power amplifier, wherein the adjustable buck voltage converter means reduces supply
7 current to the power amplifier until saturation of the power amplifier is detected.